

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

aTD224
.N2N48



United States
Department of
Agriculture

Soil
Conservation
Service

Reno
Nevada

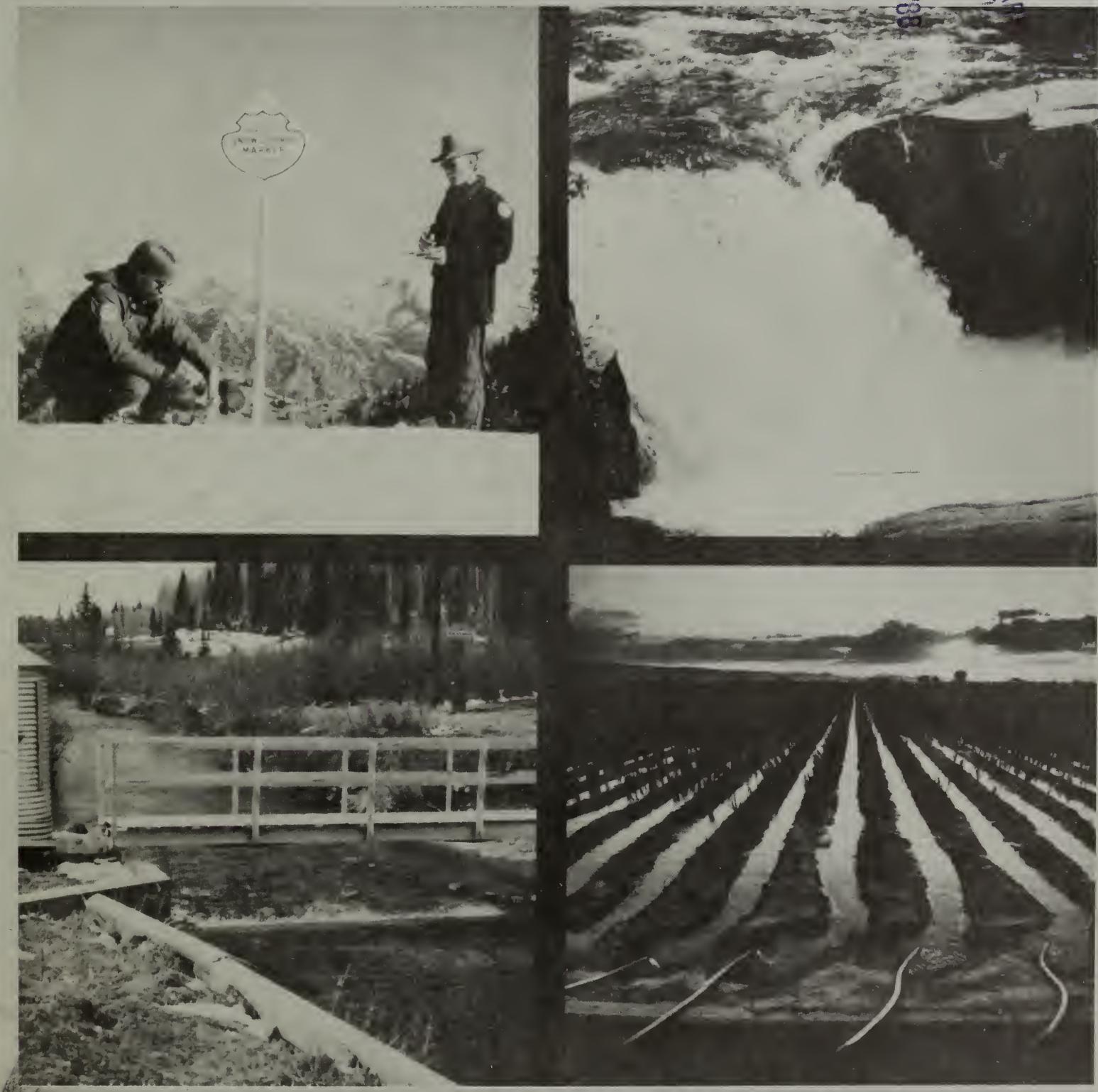


Nevada Water Supply Outlook

May 1, 1988

USDA
NAT'L AGRIC. LIBRARIES
DEPT. OF AGRICULTURE

JUN
1
88



Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are terms reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado	2490 West 26th Ave., Denver, CO 80211
New Mexico	517 Gold Ave. S.W., Room 3301, Albuquerque, NM 87102-3157
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	1201 Terminal Way, Room 219, Reno, NV 89502
Oregon	1220 Southwest 3rd Ave., Room 1640, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201-1080
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82601

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 95802; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Environment Technical Services Division, 9820 106th St., Edmonton, Alberta T5K 2J6.

Nevada Water Supply Outlook

and

Federal - State - Private Cooperative Snow Surveys

Issued By

Wilson Scaling
Chief
Soil Conservation Service
Washington, DC 20013

Released By

Charles Adams
State Conservationist
Soil Conservation Service
Reno, Nevada 89502

Prepared By

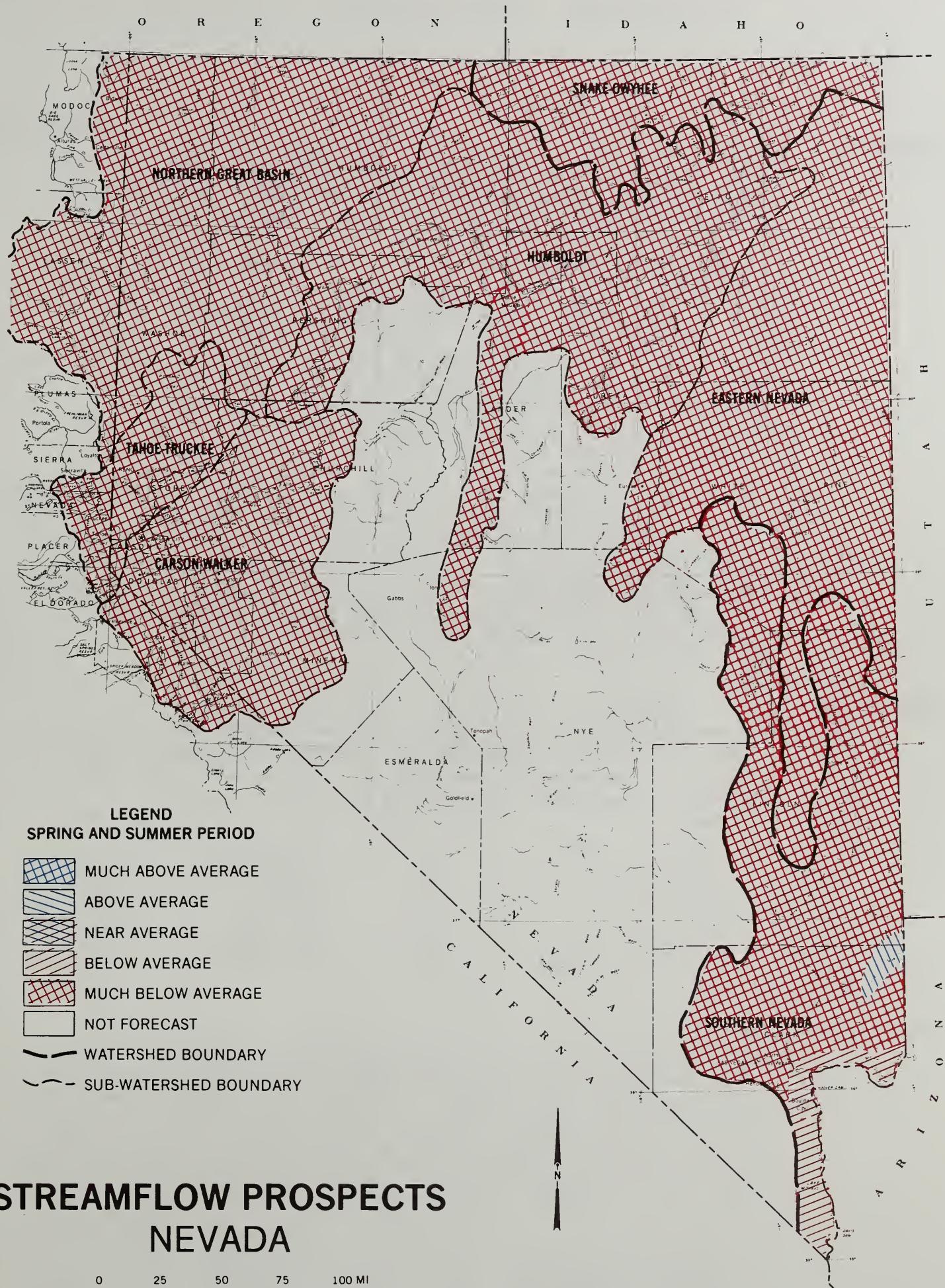
Chris Pacheco
Water Supply Specialist
Soil Conservation Service
1201 Terminal Way, Second Floor
Reno, Nevada 89502

In Cooperation With

Roland D. Westergard
Director
Department of Conservation &
Natural Resources
Carson City, Nevada 89701

TABLE OF CONTENTS

State Streamflow Prospects Map.....	1
State General Outlook.....	2
Basin Outlook and Conditions	
Tahoe & Truckee Basins.....	4
Carson & Walker Basins.....	6
Humboldt Basin.....	8
Snake & Owyhee Basins.....	10
Eastern Nevada.....	12
Northern Great Basin.....	14
Southern Nevada.....	16
Snow Data Measurements.....	18
Additional Information.....	22



SOURCE: Data compiled by SCS
Field Personnel.

APRIL 1985 4-R-39131

GENERAL OUTLOOK

SUMMARY

ALTHOUGH NEVADA RECEIVED MORE PRECIPITATION THAN IT HAD IN THE LAST TWO MONTHS, SNOWPACKS CONTINUED TO DIMINISH, WITH MOST OF THE LOWER ELEVATION SITES LOSING THEIR SNOW COMPLETELY. ALL THE BASINS EXCEPT THE SNAKE AND EASTERN NEVADA BASINS ARE BELOW 70% OF AVERAGE. THE WESTERN PORTION OF THE STATE CONTINUES TO BE THE WORST HIT, WITH SNOWPACKS RANGING FROM 5 TO 21 PERCENT OF NORMAL. APRIL PRECIPITATION RANGED FROM WELL BELOW AVERAGE IN THE WESTERN PORTION OF THE STATE TO WELL ABOVE AVERAGE IN THE NORTHWESTERN, EASTERN AND SOUTHERN PARTS OF NEVADA. TOTAL PRECIPITATION SINCE OCTOBER 1 CONTINUES TO BE WELL BELOW TO BELOW AVERAGE OVER ALL THE STATE, EXCEPT SOUTHERN NEVADA WHICH IS WELL ABOVE AVERAGE. RESERVOIR STORAGE ON THE LAST DAY OF APRIL CONTINUED TO BE WELL BELOW AVERAGE FOR MOST OF THE STATE, EXCEPT AT WILDHORSE RESERVOIR AND AT BOTH RESERVOIRS IN SOUTHERN NEVADA. STREAMFLOW FORECASTS INDICATE WELL BELOW AVERAGE FLOWS FOR MOST OF THE STATE. ONLY THE VIRGIN RIVER AND THE LAKE POWELL INFLOW ARE EXPECTED TO BE ABOVE 70% OF NORMAL.

SNOWPACK

Snowpack conditions continued to worsen over all the basins in the state except the Northern Great Basin and the Eastern Nevada Basin. There are very few sites below 8500 feet elevation with snow.

BASIN	% OF AVG.	BASIN	% OF AVG.
TAHOE.....	5%	HUMBOLDT.....	40%
TRUCKEE.....	19%	SNAKE.....	74%
CARSON.....	16%	OWYHEE.....	31%
WALKER.....	21%	EASTERN.....	63%
N. GREAT BASIN.....	38%	SOUTHERN.....	%

PRECIPITATION

April precipitation, although better than the last two months, was below average to well below average over most of the state. The Northern Great Basin and the Southern Nevada Basin both reported well above normal precipitation during the month. Year-to-date precipitation remains well below to below average for the state except in the Southern Nevada Basin.

BASIN(S)	5/1 : YTD		5/1 : YTD				
	% OF AVG.		BASIN(S)	% OF AVG.			
TAHOE & TRUCKEE	55		44	HUMBOLDT	83		77
CARSON & WALKER	67		54	EASTERN	101		88
N. GREAT BASIN	159		70	SOUTHERN	369		145
SNAKE & Owyhee	88		72				

RESERVOIRS

Reservoir storage continues to be below average to well below average for most of the reservoirs in the state. Wildhorse Reservoir was slightly below average and both reservoirs in southern Nevada were above normal.

BASIN(S)	% CAPACITY	% OF AVERAGE
TAHOE & TRUCKEE.....	29%	48%
CARSON & WALKER.....	53%	69%
HUMBOLDT.....	41%	62%
SNAKE & Owyhee.....	45%	93%
SOUTHERN NEVADA.....	93%	124%
SEVEN MAJOR RESERVOIRS.....	37%	56%

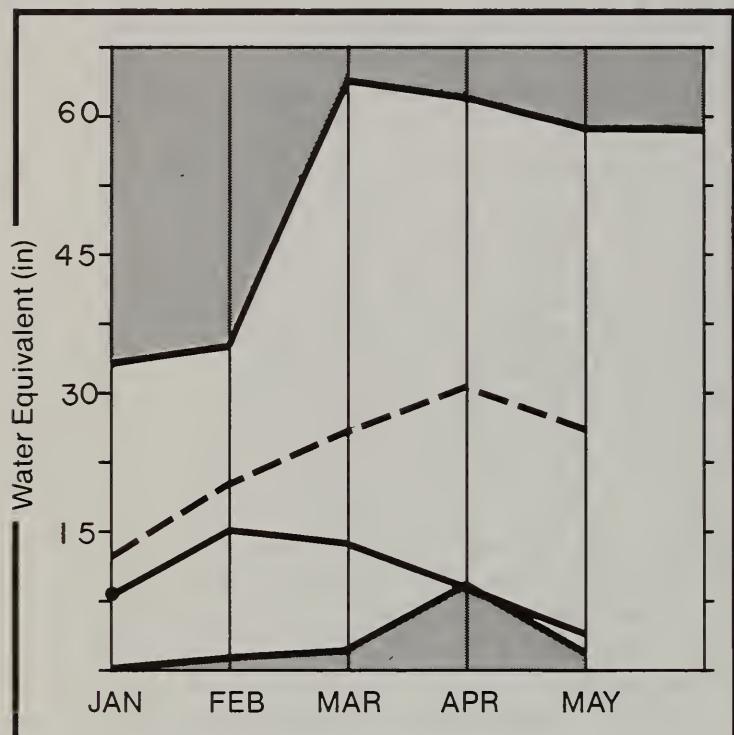
STREAMFLOW

Except for the Virgin River and the Lake Powell Inflow, streamflows throughout the state are forecast below the 70% level. In the western and northwestern portion of the state, forecasted streams are expected to flow below 35% of average.

BASIN(S)	% OF AVG.	BASIN(S)	% OF AVG.
TAHOE & TRUCKEE	12%-33%	HUMBOLDT	5%-64%
CARSON & WALKER	5%-26%	EASTERN	44%-62%
N. GREAT BASIN	19%-24%	SOUTHERN	78%-113%
SNAKE & Owyhee	44%-62%		

TAHOE & TRUCKEE BASINS

Mountain snowpack* (inches)



*Based on selected stations

Maximum



Average



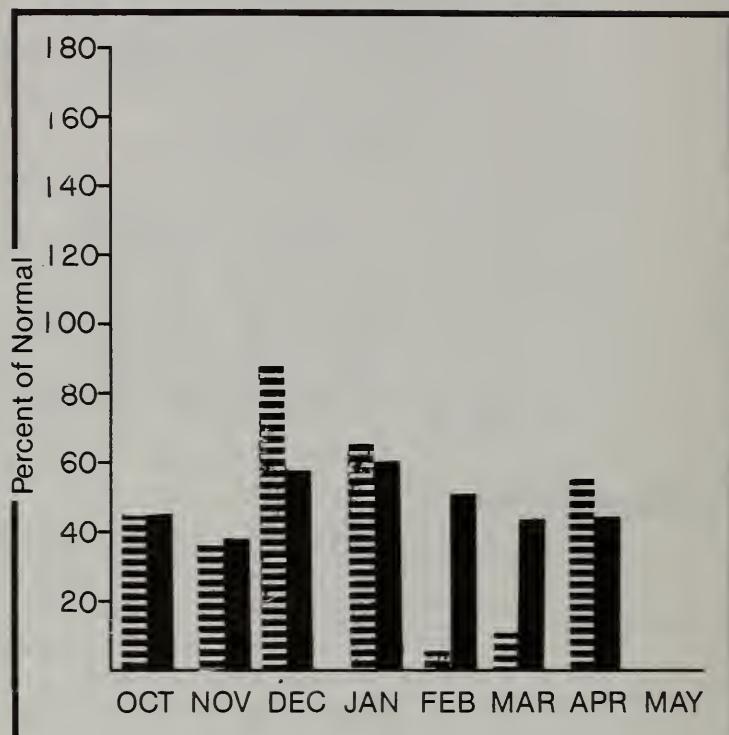
Minimum



Current



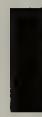
Precipitation* (percent of normal)



*Based on selected stations



Monthly precipitation



Year to date precipitation

TAHOE & TRUCKEE BASINS

Snowpack conditions on May 1 remain well below average. The Lake Tahoe Basin has about 5% of the May 1 average and 176% of the water content present last year at this time. The Truckee River Basin currently has 19% of average and 118% of last year. April precipitation for the Tahoe-Truckee Basin was 55% of average and 202% of last year. Precipitation since October 1, 1987 is 44% of average and 106% of last year's total precipitation figures at this time. Reservoir storage is 48% of average. Total storage for Boca, Lake Tahoe, Prosser and Stampede is 302,790 acre feet. The rise in Lake Tahoe from April - High is expected to be 0.1 foot. Streamflow forecasts indicate well below average flows for the forecast period. The Truckee River at Farad is expected to flow at 19% of normal or 40,000 acre feet during the May - July period.

For more information contact your local Soil Conservation Service office.

TAHOE & TRUCKEE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST	25 YR.	MOST	MOST	REAS.	REAS.	REAS.	REAS.
	PERIOD	AVG.	PROBABLE	PROBABLE	MAX.	MAX.	MIN.	MIN.
		(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)
LAKE TAHOE RISE (assume gates closed)	APR-HIG	1.5	0.1	7	1.0	68	0.0	0
TRUCKEE RIVER at Farad	2 APR-JUL	284.7	60.0	21	100.0	35	28.0	10
	MAY-JUL	215.0	40.0	19	85.0	40	17.0	8
LITTLE TRUCKEE RIVER above Boca	2 APR-JUL	91.5	11.0	12	29.0	32	5.0	5
PYRAMID LAKE RISE (LOW 2/1/87)	LOW-HIG	1.2						
STEAMBOAT CREEK at Steamboat	2 APR-JUL	7.1	0.9	13	2.0	28	0.0	0
SAGEHEN CREEK, Ca	APR-JUL	6.5	1.5	23	3.0	46	0.0	0
GALENA CREEK nr Steamboat, Nv	APR-JUL	4.5	1.5	33	2.0	44	1.0	22

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE	** USEABLE STORAGE **			WATERSHED	NO. COURSES	THIS YEAR AS % OF	
	CAPACITY	THIS	LAST	AVG.				
YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
BOCA RESERVOIR	40.9	12.3	28.5	29.5	LAKE TAHOE RISE	1	0	0
LAKE TAHOE	744.6	196.8	511.3	451.4	TRUCKEE BASIN	5	91	10
PROSSER RESERVOIR	28.6	10.0	11.7	13.2	LITTLE TRUCKEE RIVER	0	0	0
STAMPEDE RESERVOIR	226.5	83.7	153.9	139.5	SAGE HEN CREEK	2	102	16
					GALENA CREEK	0	0	0
					STEAMBOAT DRAINAGE	0	0	0
					PYRAMID LAKE	6	91	10

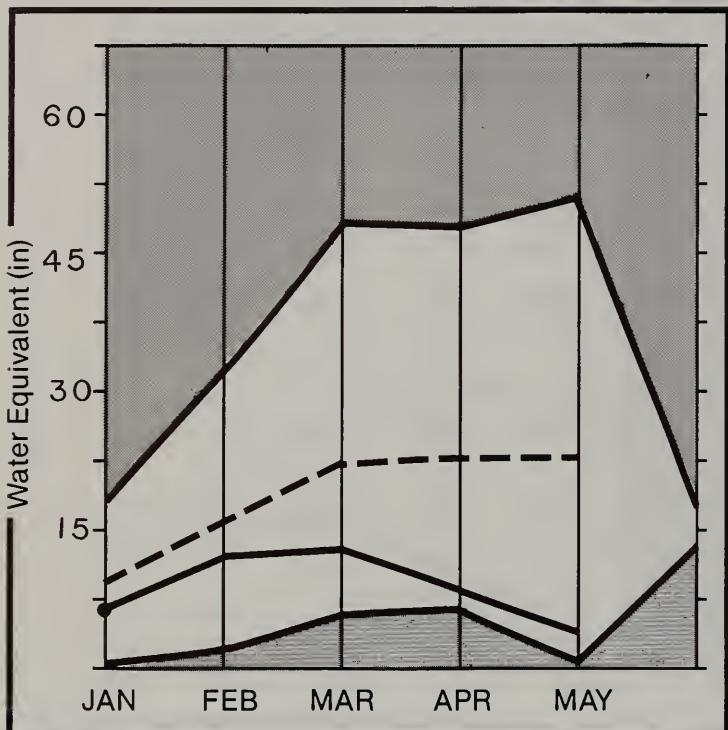
1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.

The average is computed for the 1961-85 base period.

CARSON & WALKER BASINS

Mountain snowpack* (inches)



*Based on selected stations

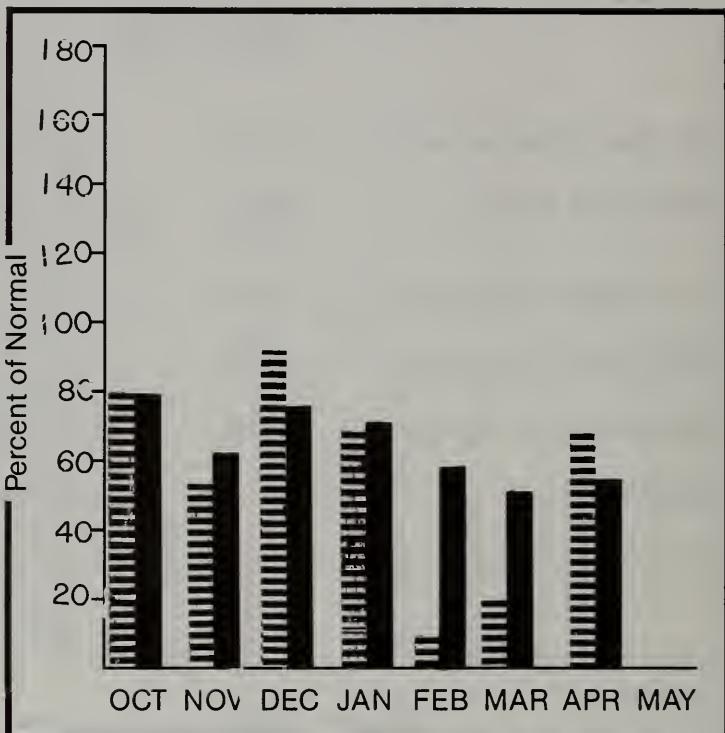
Maximum

Average

Minimum

Current

Precipitation* (percent of normal)



*Based on selected stations



Year to date precipitation

CARSON & WALKER BASINS

Snowpack conditions on May 1 remain well below average. The Carson River Basin has about 16% of the May 1 average and 95% of the water content present last year at this time. The Walker River Basin currently has 21% of average and 267% of last year. April precipitation in the Carson-Walker Basins was 67% of normal and 246% of last year. Precipitation since October 1, 1987 is 54% of average and 128% of last year's total precipitation figures at this time. Reservoir storage is 69% of average. Total storage for Bridgeport, Lahontan and Topaz is 210,717 acre feet. Streamflow forecasts indicate well below average for the forecast period. The Carson River near Carson City is expected to flow at 9% of normal or 14,400 acre feet during the May - July period.

For more information contact your local Soil Conservation Service office.

CARSON & WALKER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG.	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
EF CARSON RIVER nr Gardnerville, Nv	APR-JUL	198.4	45.0	23	71.0	36	19.0	10
	MAY-JUL	165.8	29.0	17	50.0	30	13.0	8
WF CARSON RIVER at Woodfords, Ca	APR-JUL	56.7	10.0	18	20.0	35	2.0	4
	MAY-JUL	45.7	5.0	19	16.0	35	2.7	6
CARSON RIVER near Carson City, Nv	APR-JUL	198.3	20.0	10	56.0	28	10.0	5
	MAY-JUL	163.1	14.4	9	42.0	26	6.5	4
CARSON RIVER near Ft. Churchill, Nv	APR-JUL	182.4	9.0	5	115.0	63	3.6	2
	MAY-JUL	151.0	6.0	4	83.0	55	3.0	2
EAST WALKER RIVER nr Bridgeport 2	APR-AUG	76.8	15.0	20	41.0	53	7.0	9
	MAY-AUG	67.3	13.0	19	34.0	50	6.0	9
WEST WALKER RIVER near Coleville, Ca	APR-JUL	154.6	40.0	26	60.0	39	20.0	13
	MAY-JUL	138.7	29.0	21	49.0	35	14.0	10
WALKER LAKE RISE (LOW 2/1/87)	LOW-HIG	-0.0	-3.3					

RESERVOIR STORAGE (1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			AVG'D	LAST YR.
BRIDGEPORT RESERVOIR	42.5	15.6	37.2	30.5	E. CARSON RIVER	1	0	0
LAHONTAN RESERVOIR	295.1	177.0	258.5	229.0	W. CARSON RIVER	1	0	0
TOPAZ RESERVOIR	59.4	18.0	39.3	43.8	CARSON Rv. at Carson City	1	0	0
					CARSON Rv. at Ft. Churchi	1	0	0
					E. WALKER Rv. nr Bridgepo	0	0	0
					W. WALKER Rv. nr Colevill	0	0	0
					WALKER LAKE RISE	0	0	0

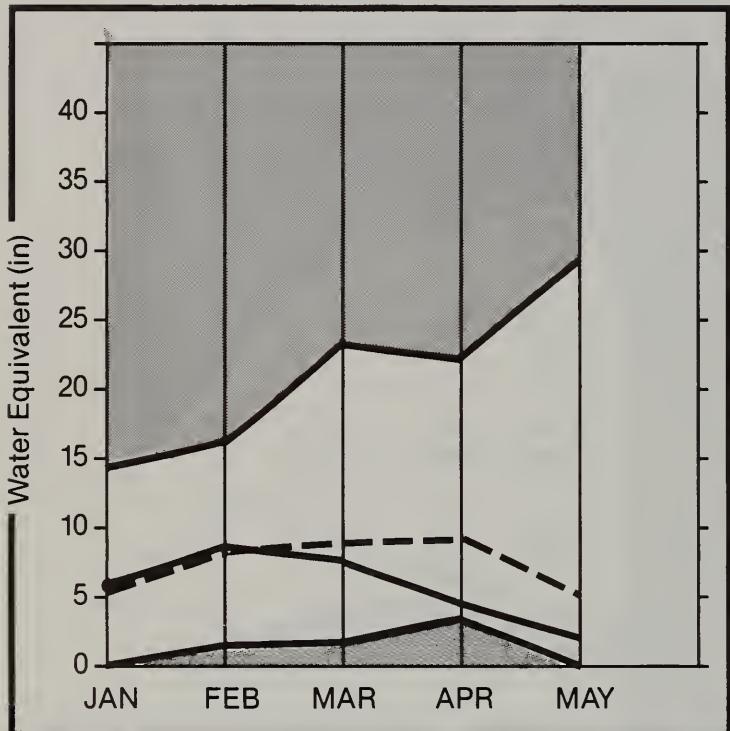
1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.

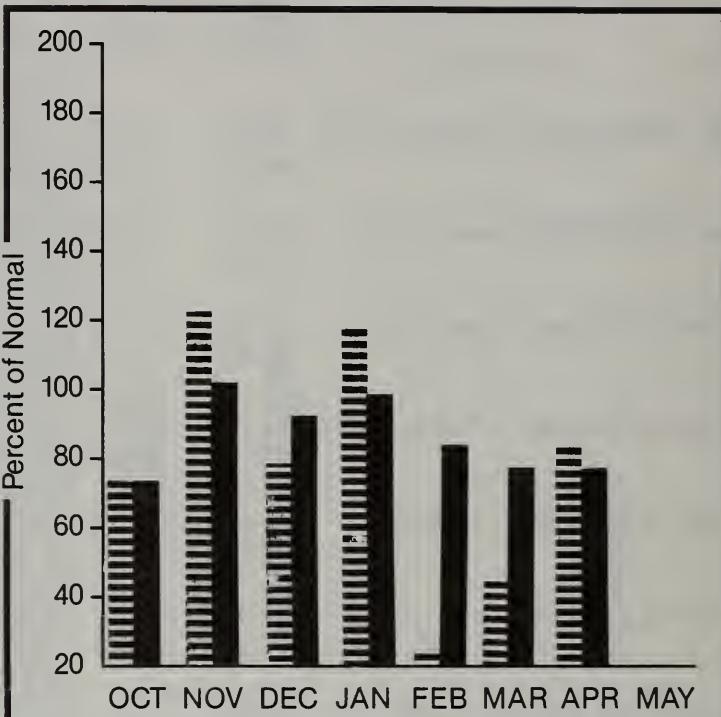
The average is computed for the 1961-85 base period.

HUMBOLDT BASIN

Mountain snowpack* (inches)



Precipitation* (percent of normal)



*Based on selected stations

*Based on selected stations

Maximum

Average



Minimum

Current

Monthly precipitation

Year to date precipitation

HUMBOLDT BASIN

Snowpack conditions on May 1 remain well below average. The Upper Humboldt River Basin has about 29% of the May 1 average and 263% of the water content present last year at this time. The Lower Humboldt River Basin currently has 52% of average and 200% of last year. April precipitation in the Humboldt River Basin was 83% of average and 360% of last year. Precipitation since October 1, 1987 is 77% of average and 136% of last year's total precipitation figures at this time. Reservoir storage is 62% of average. Total storage for Rye Patch Reservoir is 79,350 acre feet. Streamflow forecasts indicate well below average flows for the April - July forecast period. The Humboldt River at Palisade is expected to flow at 13% of normal or 35,000 acre feet.

For more information contact your local Soil Conservation Service office.

HUMBOLDT BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG.	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
HUMBOLDT RIVER at Palisade	APR-JUL	269.0	35.0	13	265.0	99	15.0	6
HUMBOLDT RIVER at Comus	APR-JUL	229.1	15.0	7	260.0	113	5.0	2
S FORK HUMBOLDT RIVER at Dixie	APR-JUL	71.5	30.0	42	91.0	127	10.0	14
NF HUMBOLDT RIVER at Devils Gate	APR-JUL	34.3	10.0	29	35.0	102	3.0	9
MARY'S RIVER nr Deeth	APR-JUL	24.4	12.2	50	26.0	107	5.0	20
MARTIN CREEK nr Paradise Nv	APR-JUL	19.0	5.0	26	13.0	68	1.0	5
LAMOILLE CREEK nr Lamoille	APR-JUL	29.5	13.0	44	24.0	81	2.0	7
REESE RIVER nr Ione Nv	APR-JUL	7.8	5.0	64	12.0	154	2.0	26
L. HUMBOLDT RIVER nr Paradise Valley	APR-JUL	12.5	3.0	24	8.0	64	1.0	8
ROCK CREEK nr Battle Mtn.	APR-JUL	22.0	1.0	5	20.0	91	0.4	2

RESERVOIR STORAGE (1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **	WATERSHED	NO. COURSES	THIS YEAR AS % OF
	THIS YEAR	LAST YEAR	AVG.	AVG'D	LAST YR. AVERAGE
RYE PATCH RESERVOIR	194.3	79.4	136.5	128.1	LAMOILLE CREEK 0 0 0
					S. FORK HUMBOLDT 0 0 0
					MARY'S RIVER 4 191 74
					N. FORK HUMBOLDT 0 0 0
					HUMBOLDT Rv. at Palisades 0 0 0
					HUMBOLDT RIVER at Comus 0 0 0
					LITTLE HUMBOLDT RIVER 0 0 0
					MARTIN CREEK 0 0 0
					REESE RIVER 0 0 0
					ROCK CREEK 0 0 0

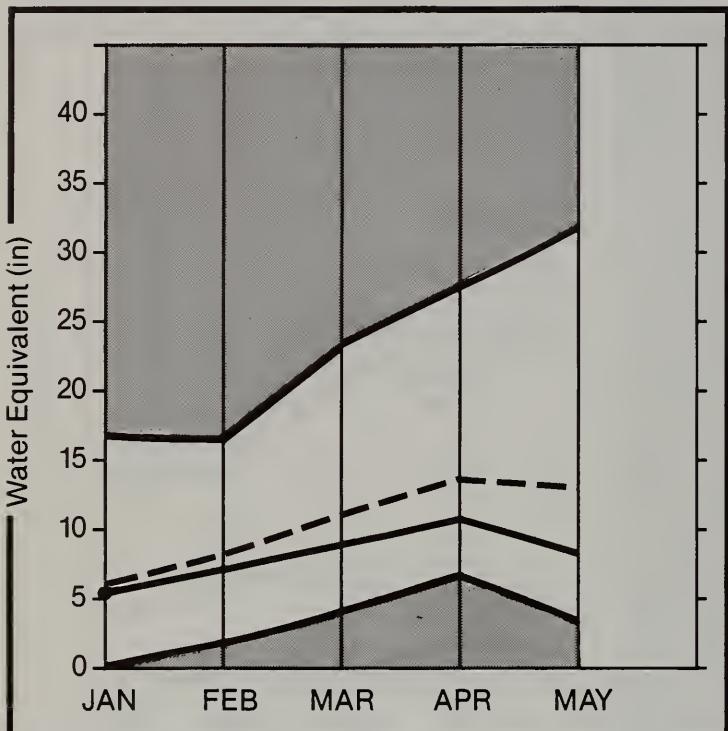
1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.

The average is computed for the 1961-85 base period.

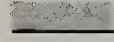
SNAKE & Owyhee Basins

Mountain snowpack* (inches)



*Based on selected stations

Maximum



Average



Minimum



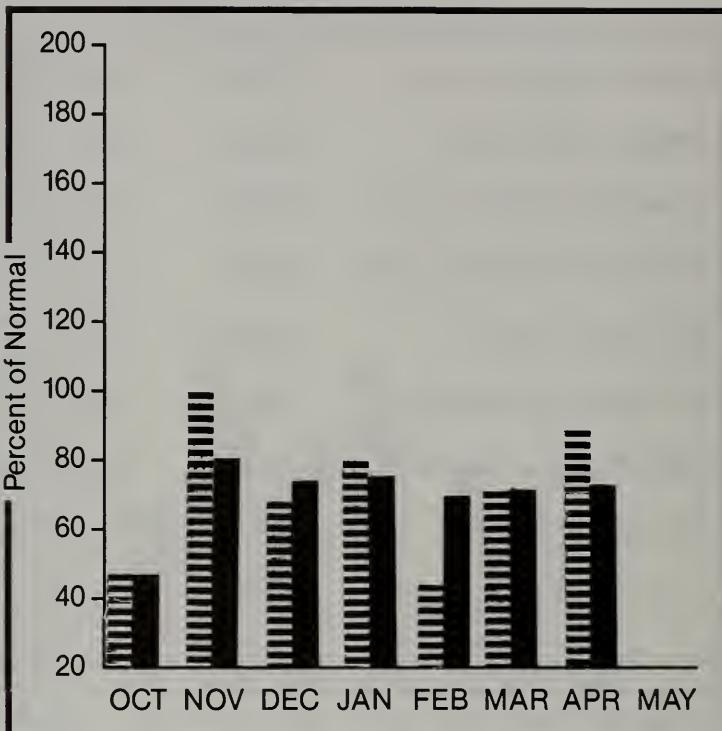
Current



SNAKE & Owyhee Basins

Snowpack conditions on May 1 range from below average to well below average. The Snake River Basin has about 74% of the May 1 average and 191% of the water content present last year at this time. The Owyhee River Basin currently has 31% of average and last year at this time the sites in the basin were reporting no snow. April precipitation in the Snake-Owyhee Basin was 88% of average and 219% of last year. Precipitation since October 1, 1987 is 72% of average and 137% of last year's total precipitation figures at this time. Reservoir storage is 93% of average. Total storage for Wildhorse Reservoir is 32,440 acre feet. Streamflow forecasts indicate well below average flows for the forecast period. The Owyhee River near Owyhee is expected to flow at 44% of average or 38,000 acre feet during the April - July period.

Precipitation* (percent of normal)



*Based on selected stations



Monthly precipitation

Year to date precipitation

For more information contact your local Soil Conservation Service office.

SNAKE & Owyhee Basins

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST	25 YR.	MOST	MOST	REAS.	REAS.	REAS.	REAS.
	PERIOD	AVG.	PROBABLE	PROBABLE	MAX.	MAX.	MIN.	MIN.
		(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)
OWYHEE RIVER near Gold Creek	APR-JUL	27.8	13.0	47	28.0	101	3.0	11
	MAY-JUL	13.9	6.4	46	12.5	90	1.5	11
OWYHEE RIVER nr Owyhee	APR-JUL	86.0	38.0	44	65.0	76	11.0	13
S FORK Owyhee nr White Rock, Nv	APR-JUL	83.0	43.0	52	69.0	83	17.0	20
SALMON FALLS CK nr San Jacinto	MAR-JUL	97.0	60.0	62	90.0	93	20.0	21
	MAY-JUL	62.0	37.0	60	60.0	97	13.0	21

RESERVOIR STORAGE (1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE	** USEABLE STORAGE **			WATERSHED	NO. COURSES	THIS YEAR AS % OF	
	CAPACITY	THIS	LAST	YEAR	YEAR	Avg'D	LAST YR.	AVERAGE
WILDHORSE RESERVOIR	71.5	32.4	45.4	34.7	OWYHEE RIVER nr Owyhee	1	311	55
					OWYHEE Rv. nr Gold Creek	0	0	0
					S. FORK Owyhee RIVER	1	311	55
					SALMON FALLS CREEK	3	206	72

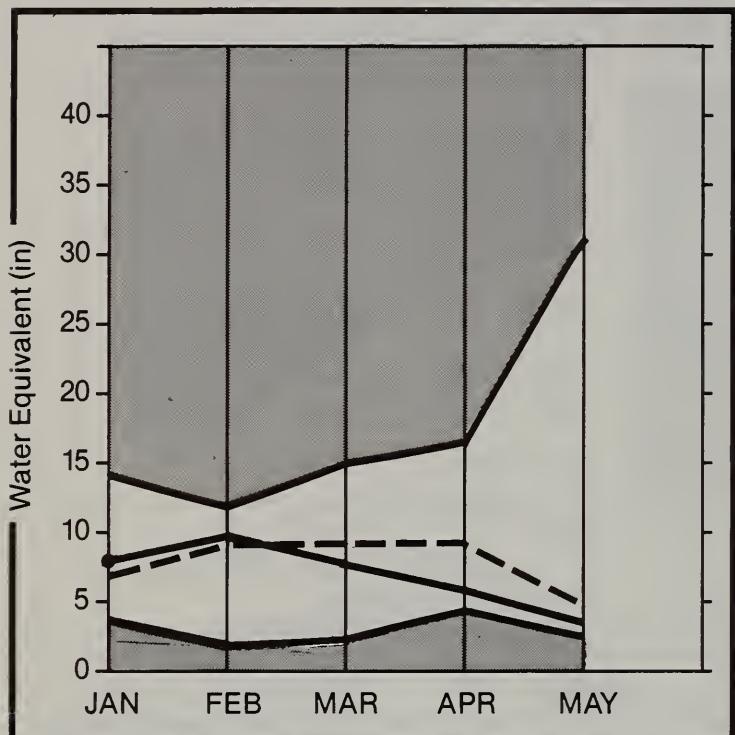
1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.

The average is computed for the 1961-85 base period.

EASTERN NEVADA

Mountain snowpack* (inches)



*Based on selected stations

Maximum



Average



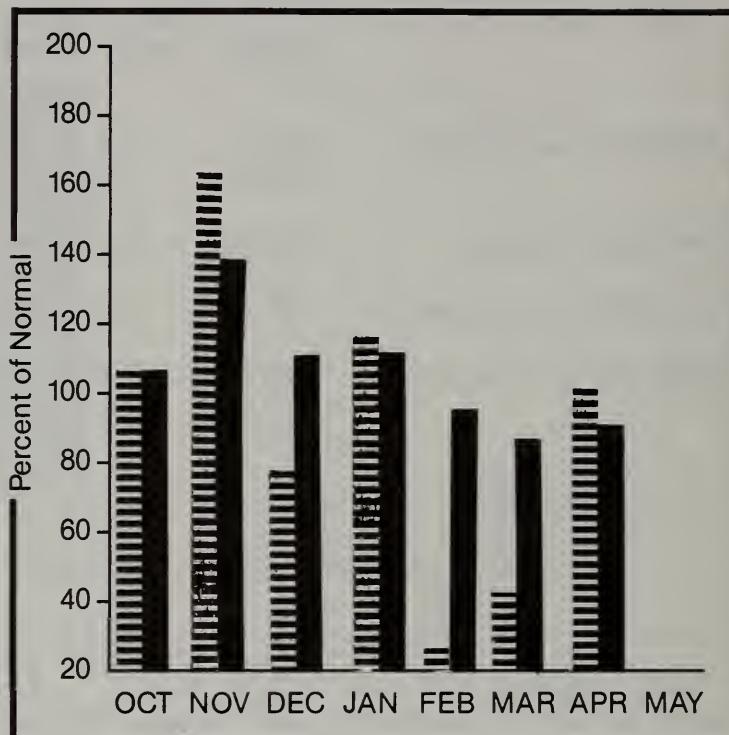
Minimum



Current



Precipitation* (percent of normal)

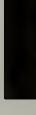


*Based on selected stations

Monthly precipitation



Year to date precipitation



EASTERN NEVADA

Snowpack conditions on May 1 are below average. The sites in the Franklin River Basin are reporting no snow at this time. The snowpack in the Kingston Creek Basin is about 78% of average and 200% of last year. Overall, the Eastern Nevada Basin has 77% of the May 1 average and 483% of the water content present last year at this time. April precipitation in the Eastern Nevada Basin was 101% of average and 438% of last year. Precipitation since October 1, 1987 is 90% of average and 157% of last year's total precipitation figures at this time. Streamflow forecasts indicate well below average flows for the April - July forecast period. The Franklin River near Arthur is expected to flow at 44% of normal or 3000 acre feet.

For more information contact your local Soil Conservation Service office.

EASTERN NEVADA

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST	25 YR.	MOST	MOST	REAS.	REAS.	REAS.	REAS.
	PERIOD	AVG.	PROBABLE	PROBABLE	MAX.	MAX.	MIN.	MIN.
		(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)
STEPTOE CREEK nr Ely	APR-JUL	3.2	2.0	62	5.0	155	1.0	31
KINGSTON CREEK nr Austin, Nv	APR-JUL	4.2	2.7	64	6.0	142	1.0	24
FRANKLIN RIVER nr Arthur	APR-JUL	6.9	3.0	44	9.0	131	1.0	15

RESERVOIR STORAGE

(1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE	** USEABLE STORAGE **			WATERSHED	NO. COURSES	THIS YEAR AS % OF	
	CAPACITY:	THIS	LAST	YEAR	YEAR	AVG.	AVG'D	LAST YR. AVERAGE
					FRANKLIN RIVER	0	0	0
					KINGSTON CREEK	0	0	0
					EASTERN NEVADA	0	0	0
					STEPTOE VALLEY	0	0	0

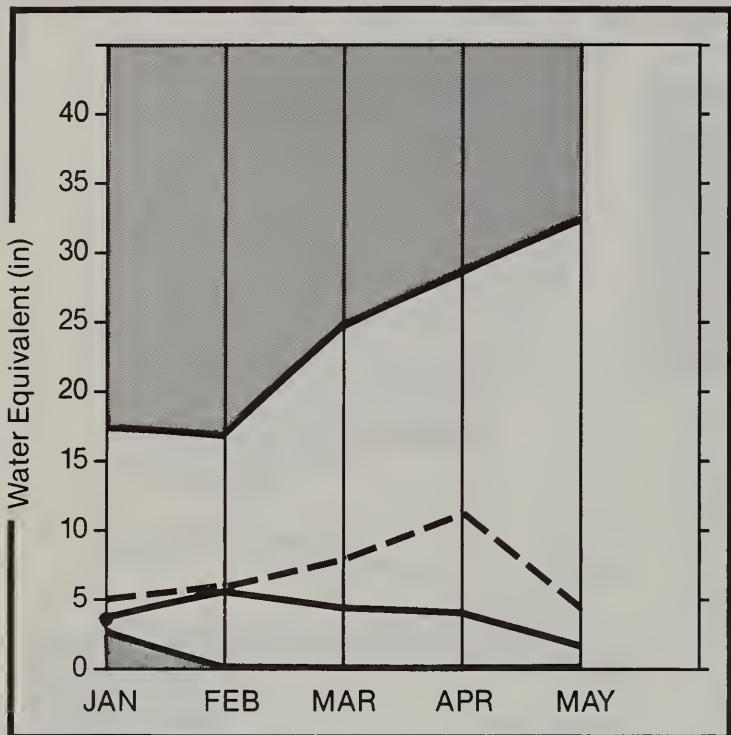
1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.

The average is computed for the 1961-85 base period.

NORTHERN GREAT BASIN

Mountain snowpack* (inches)



*Based on selected stations

Maximum



Average



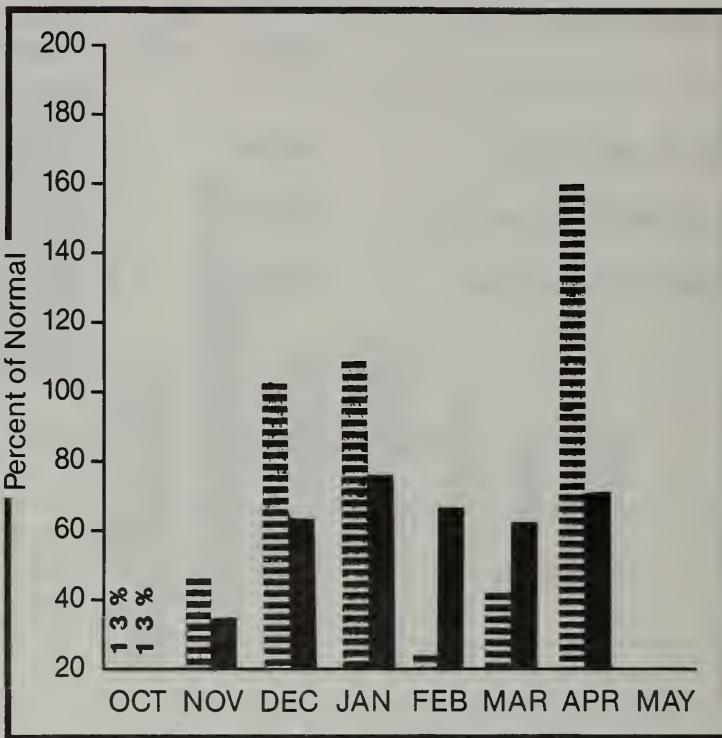
Minimum



Current



Precipitation* (percent of normal)



*Based on selected stations



Year-to-date precipitation



NORTHERN GREAT BASIN

Snowpack conditions on May 1 remain well below average. Snow water content in the Bidwell Creek Watershed is about 44% of average and 152% of last year. The Quinn River Watershed is about 26% of average and 118% of last year. Overall, the Northern Great Basin has 38% of the May 1 average and 143% of the water content present last year at this time. April precipitation in the Northern Great Basin was 159% of average and 241% of last year. Precipitation since October 1, 1987 is 70% of average and 108% of last year's total precipitation figures at this time. Streamflow forecasts indicate well below average flows for the April - July forecast period. Bidwell Creek near Fort Bidwell is expected to flow at 36% of normal or 4300 acre feet.

For more information contact your local Soil Conservation Service office.

NORTHERN GREAT BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG.	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
BIDWELL CREEK nr Fort Bidwell	APR-JUL	12.0	4.3	36	8.0	67	1.0	8
DEEP CREEK nr Cedarville, Ca	APR-JUL	3.6	1.3	36	2.0	56	0.5	14
EAGLE CREEK nr Eagleville, Ca	APR-JUL	4.3	1.7	40	3.0	70	0.4	9
MILL CREEK nr Cedarville, Ca	APR-JUL	4.1	1.3	32	3.0	73	0.4	10
QUINN RIVER nr McDermitt, Nv	APR-JUL	16.0	3.0	19	10.0	63	1.0	6
E. FORK QUINN RIVER nr McDermitt	APR-JUL	10.4	2.5	24	7.0	67		-9
MCDERMITT CREEK nr McDermitt	APR-JUL	14.4	3.5	24	9.0	63	1.0	7

RESERVOIR STORAGE (1000AF)

WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE	** USEABLE STORAGE **			WATERSHED	NO. COURSES	THIS YEAR AS % OF	
	CAPACITY	THIS YEAR	LAST YEAR	AVG.			AVG'D	LAST YR. AVERAGE
					BIDWELL	1	0	0
					MILL CREEK	1	0	0
					DEEP CREEK	1	0	0
					EAGLE CREEK	1	0	0
					QUINN RIVER	0	0	0
					E. FORK QUINN	0	0	0
					McDERMITT CREEK	0	0	0

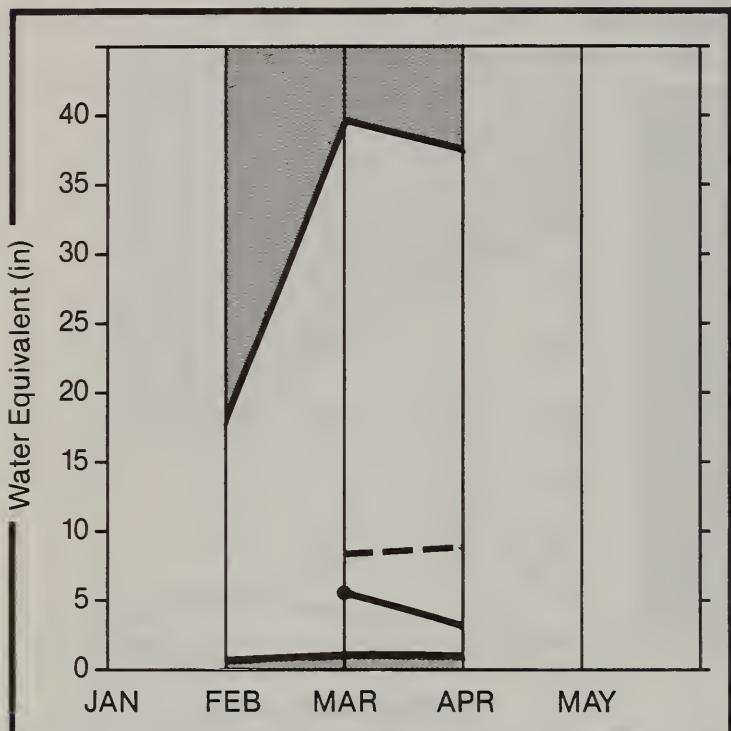
1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.

The average is computed for the 1961-85 base period.

SOUTHERN NEVADA

Mountain snowpack* (inches)

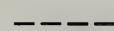


*Based on selected stations

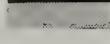
Maximum



Average



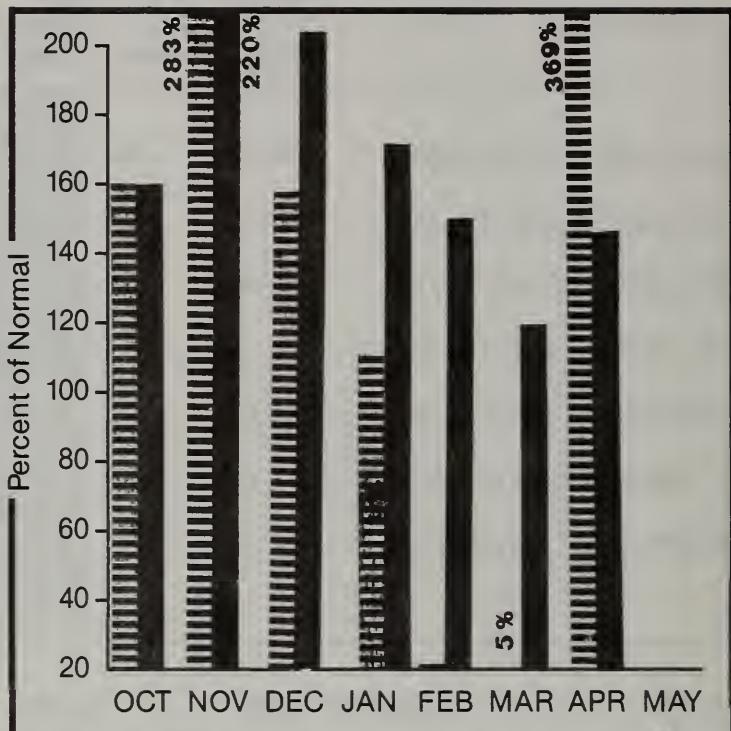
Minimum



Current



Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation



Year to date precipitation

SOUTHERN NEVADA

Snowpack conditions on May 1 in the Virgin River Watershed are below average. Snow water content in the Virgin River Watershed is currently 88% of average and 148% of last year. April precipitation in the Southern Nevada Basin was 369% of average and 315% of last year. Precipitation since October 1, 1987 is 145% of average and 144% of last year's total precipitation figures at this time. Reservoir storage is 124% of average. Total storage for Lake Mohave and Lake Mead is 27,969,000 acre feet. Streamflow forecasts indicate the Virgin River near Hurricane, UT will flow at 118% of average or 80,000 acre feet during the April - July forecast period.

For more information contact your local Soil Conservation Service office.

SOUTHERN NEVADA

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST	25 YR.	MOST	MOST	REAS.	REAS.	REAS.	REAS.
	PERIOD	AVG.	PROBABLE	PROBABLE	MAX.	MAX.	MIN.	MIN.
		(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)	(1000AF)	(% AVG.)
VIRGIN RIVER near Hurricane, UT	APR-JUL	68.0	80.0	118	113.0	166	47.0	69
	MAY-JUN	43.8	50.0	114	70.0	160	30.0	68
LAKE POWELL inflow	APR-JUL	8086.0	6300.0	78	8160.0	101	4600.0	57

RESERVOIR	RESERVOIR STORAGE			(1000AF)	WATERSHED SNOWPACK ANALYSIS			
	USEABLE CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			AVG'D	LAST YR. AVERAGE
LAKE MOHAVE	1810.0	1774.2	1728.2	1675.0	VIRGIN Rv. at Littlefield	4	148	88
LAKE MEAD	26159.0	24144.0	24043.0	19278.0	VIRGIN Rv. at Hurricane,	4	148	88

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.

The average is computed for the 1961-85 base period.

SNOW DATA MEASUREMENTS

SNOW COURSE	EL ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
LAKE TAHOE						
ECHO PEAK (CA)	7800	4/29/88	---	2.4E	--	36.7
ECHO SUMMIT (CA)	7450	4/29/88	8	3.0	--	27.8
FALLEN LEAF (CA)	6300	5/01/88	0	.0E	.0	.0
FREEL BENCH (CA)	7300	5/01/88	0	.0E	--	5.0
GLENBROOK #2	6900	5/01/88	0	.0E	--	3.6
HAGANS MEADOW (CA)	8000	5/01/88	0	.0E	--	11.8
HEAVENLY VALLEY (CA)	8850	5/01/88	0	.0E	--	27.1
MARLETTE LAKE	8000	5/01/88	0	.0E	--	20.3
RICHARDSONS #2 (CA)	6500	5/01/88	0	.0E	--	4.7
RUBICON #2 (CA)	7500	4/26/88	---	1.7E	--	31.2
TAHOE CITY CROSS (CA)	6750	5/01/88	0	.0E	--	16.9
TRUCKEE, UPPER (CA)	6400	5/01/88	0	.0E	--	2.2
WARD CREEK #2 (CA)	7000	4/26/88	---	1.2E	--	37.4
WARD CREEK #3 (CA)	6750	5/01/88	---	5.4E	--	35.3
TRUCKEE RIVER						
BIG MEADOWS	8300	5/01/88	0	.0E	.0	19.6
BROCKWAY SUMMIT (CA)	7100	5/01/88	0	.0E	--	2.8
CASTLE CREEK (CA)	7400	5/02/88	28	13.3	14.0	50.9
DONNER SUMMIT (CA)	6900	4/26/88	7	1.8	3.0	34.1
FORDYCE LAKE (CA)	6500	4/27/88	7	2.4	2.3	38.6
FURNACE FLAT (CA)	6700	4/27/88	28	11.8	11.6	47.9
INDEPENDENCE CAMP CA	7000	5/01/88	0	.0E	--	15.7
INDEPENDENCE CREEK	6500	5/01/88	0	.0E	--	6.3
INDEPENDENCE LAKE CA	8450	5/01/88	---	17.4E	--	45.3
LITTLE VALLEY	6300	5/01/88	0	.0E	--	.0
MT. ROSE	9000	5/01/88	---	10.8E	--	34.2
MT. ROSE SKI AREA	9000	5/01/88	---	13.9E	--	43.3
SQUAW VALLEY #2 (CA)	7500	5/01/88	---	9.1E	--	50.9
SQUAW VALLEY G.C., CA	8200	5/01/88	---	9.5S	--	55.6
TAHOE CITY CROSS (CA)	6750	5/01/88	0	.0E	--	16.9
TRUCKEE #2 (CA)	6400	5/01/88	0	.0E	--	9.3

SNOW DATA MEASUREMENTS (CONT)

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
<hr/>						
CARSON RIVER						
BLUE LAKES (CA)	8000	4/28/88	28	13.2	--	35.2
CARSON PASS, UP (CA)	8600	4/27/88	0	.0	.0	34.1
CLEAR CREEK	7300	5/01/88	0	.0E	--	.0
POISON FLAT #2 (CA)	7900	5/01/88	---	.6E	--	12.2
SPRATT CREEK (CA)	6080	5/01/88	0	.0E	--	.0
WET MEADOWS #2 (CA)	8100	5/01/88	---	8.8E	--	41.2
WALKER RIVER						
LEAVITT LAKE (CA)	9400	5/01/88	---	11.9E	--	55.0
LEAVITT MEADOWS (CA)	7200	5/01/88	0	.0E	--	.0
LOBDELL LAKE (CA)	9200	5/01/88	---	1.7E	--	16.6
SAWMILL RIDGE (CA)	8750	5/01/88	---	1.6E	--	18.6
SONORA PASS (CA)	8800	5/01/88	---	6.5E	--	22.0
VIRGINIA LAKES (CA)	9500	5/01/88	---	1.7E	--	15.5
VIRGINIA LAKES RIDGE	9200	5/01/88	---	5.2E	--	18.4
WILLOW FLAT (CA)	8250	5/01/88	0	.0E	--	1.7
NORTHERN GREAT BASIN						
DISASTER PEAK	6500	5/01/88	0	.0E	--	3.0

SNOW DATA MEASUREMENTS (CONT)

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
<hr/>						
HUMBOLDT RIVER, UPPER						
CORRAL CANYON	8500	5/01/88	---	9.0E	--	14.7
DORSEY BASIN	8100	5/01/88	0	.0E	--	12.4
DRY CREEK	6500	5/01/88	0	.0E	--	.0
FRY CANYON	6700	5/01/88	0	.0E	--	1.3
GREEN MOUNTAIN	8000	5/01/88	---	1.5E	--	9.9
HARRISON PASS #1	6600	5/01/88	0	.0E	--	.0
HARRISON PASS #2	7400	5/01/88	0	.0E	--	.0
POLE CANYON #2	7700	5/01/88	0	.0E	--	--
RYAN RANCH	5800	5/01/88	0	.0E	--	.0
TREMEWAN RANCH	5700	5/01/88	0	.0E	--	.0
TROUT CREEK, LOWER	6900	5/01/88	0	.0E	--	.0
HUMBOLDT RIVER, LOWER						
BIG CREEK CAMPGROUND	6600	5/01/88	0	.0E	--	.0
BIG CREEK MINE	7600	5/01/88	---	2.4E	--	.0
BIG CREEK SUMMIT	8700	5/01/88	---	10.0E	--	15.8
BUCKSKIN, LOWER	6700	5/01/88	0	.0E	--	.0
GOLCONDA #2	6000	5/01/88	0	.0E	--	.0
GRANITE PEAK	7800	5/01/88	---	5.7E	--	18.9
LAMANCE CREEK	6000	5/01/88	0	.0E	--	.0
MARTIN CREEK	6700	5/01/88	0	.0E	--	.0
MIDAS	7200	5/01/88	0	.0E	--	.0

SNOW DATA MEASUREMENTS (CONT)

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
<hr/>						
SNAKE RIVER						
BEAR CREEK	7800	5/01/88	---	11.8E	3.8	21.5
GOAT CREEK	8800	5/02/88	45	16.6	7.3	20.9
HUMMINGBIRD SPRINGS	8950	5/02/88	54	21.6	13.1	27.7
POLE CREEK R.S.	8330	5/02/88	47	18.8	11.8	23.4
SEVENTYSIX CREEK	7100	5/01/88	0	.0E	--	7.6
OWYHEE RIVER						
BIG BEND	6700	5/01/88	0	.0E	--	2.8
JACK CREEK, UPPER	7250	5/01/88	---	2.6E	--	5.2
JACK CREEK #2, UPPER	7280	5/01/88	---	5.6E	.3	14.6
JACKS PEAK	8420	5/01/88	---	9.0E	--	28.3
TAYLOR CANYON	6200	5/01/88	0	.0E	--	.7
EASTERN NEVADA						
BERRY CREEK	9100	5/01/88	---	12.6E	--	16.3
WARD MOUNTAIN #2	9200	5/01/88	---	3.0E	--	--

SNOW CORE MEASUREMENTS - DRI-ASC

DATE APR.	SITE	ELEVATION FEET	LOCATION	SNOW IN.	WATER IN.	DENSITY	% OF NORMAL
28	JC	5800	Clear Creek	0	0		
28	SS	7260	Spooner Summit	0	0		
28	FT	5250	Cliff Ranch, Franktown	0	0		
28	LV	6540	Little Valley	0	0		
28	DC	5160	Davis Creek	0	0		
28	8	4590	Jct. 395 & NV 27	0	0		
28	6	5110	Lancer	0	0		
28	4	5670	Whites Creek	0	0		
28	R	5700	Evergreen Hills Rd.	0	0		
28	2	6000	Jones Creek	0	0		
28	O	6400	RNR Forestry Site	0	0		
28	N	7060	Reindeer Lodge	0	0		
28	M	7440	Galena Creek	0	0		
28	K	7620	Sky Tavern	0	0		
28	G	8280	Mt. Rose Resort	0	0		
28	D	8820	Tamarack Lake	18.0	8.5	.47	24
28	A	8540	Tahoe Meadows	17.0	8.0	.47	18
28	U	8000	Below Incline Lake	0	0		
28	V	7300	Apollo Way	0	0		
28	Z	6235	Third & Incline Creeks	0	0		
28	BS	7200	Brockway Summit	0	0		
28	NS	6320	North Star Fire Dept.	0	0		
28	TRK	5900	Truckee - Tahoe Airport	0	0		
28	CK	6540	Cabin Creek	0	0		
28	SV	6240	Squaw Valley Fire Dept.	0	0		
28	TC	6200	Thunder Cliff	0	0		
28	TP	6240	Tahoe City	0	0		
28	BF	6200	Bennett Flat	0	0		
28	AC	6960	Alder Creek	0	0		
28	HM	5850	Hobart Mills	0	0		
28	SA	6340	Sagehen Creek	0	0		
28	LT	6410	Henness Pass Jct.	0	0		
28	FL	6200	Fuller Lake	0	0		
28	JL	6000	Joy Lake	0	0		
			() Estimated				

Surviving a Water Shortage Takes Good Management

What can be done to nurture trees, shrubs, lawns and gardens through a water-short year?

First, try to learn all you can about how much water will be available and what regulations might be put into effect.

Absorb all you can about relationships among soil, water and plants — especially your own.

Develop a plan for applying water based on supply, needs, alternatives and current conditions.

Observe and measure how your plan is working.

Those plant, water and soil relationships are crucial to success of your management plan.

Plants differ in how much water they need to survive or prosper — and this varies with climate and changing weather conditions.

Sprinklers and other devices for applying water vary in how fast they can deliver water.

And finally, soils differ in how fast they absorb moisture, how much they store and how long they retain it.

A rule of thumb says 1 inch of moisture will penetrate 12 inches deep in sandy soil; 7 inches in loam, and 4 to 5 inches in clay.

ALTERNATIVES

For best results check how long it takes to soak the entire root zone and how long this watering will last.

Don't apply water faster than soil can absorb.

Don't let water run off into street or driveway.

Water early in the day to reduce evaporation loss.

CONSERVE MOISTURE

Mulch around trees and shrubs and between garden rows. This holds in moisture, discourages weeds which compete for moisture.

Aerate your lawn to permit better water penetration.

Set your lawn mower blade to leave 2 or more inches of grass after mowing.

Fertilize adequately. A sick looking lawn or garden many need more fertilizer, not more water. Apply fertilizer before regular watering.

If it rains, reduce watering time accordingly. Measure how much rain has fallen, adjust watering schedule and duration accordingly.

APPLY WATER EFFICIENTLY

Water deep and less often. Shallow, frequent watering encourages shallow roots, more evaporation loss and reduces the moisture reservoir in the soil.

Stretch Your Irrigation Water

Soil can absorb irrigation water only at a given rate, which varies for each soil type. Water requirements vary for different crops. Make sure you apply water to your crop only when needed. Check soil moisture by space, probe, or soil moisture meter, and make careful visual checks of your crops.

If you have a conservation plan on your farm, or if the soil in your area has been mapped, the Soil Conservation Service can cross-check soil type and irrigation data and provide you with the water holding capacity of your soil for a given crop.

Don't know if your soil has been mapped? Check with the local SCS office. Even if the soil has not been mapped, the SCS can supply you with general information.

Water stretching measures are important to most farmers in the West. To use your available water in the most productive way possible, here's a checklist to help you analyze your irrigation system.

Make sure ditches are clean and free from weeds, sediment, or other debris which can slow water velocity, affect delivery rate and increase evaporation.

Consider lining ditches with concrete or plastic. This could avoid the 10-90 percent loss which often occurs in ditches.

Make sure ditch structures — like headgates, drop structures, and pipe inlets — are strong and functional. A washed-out ditch structure could mean a lot of water lost.

Make sure ditchbanks are firm and not burrowed into by rodents. Rodent holes could cause leakage or failures.

Make sure your pump is operating at peak efficiency. Adequate maintenance will improve efficiency, guard against water loss, and avoid shutdowns.

Inspect your system *before* water starts to flow.

IRRIGATION SYSTEMS

Make sure nozzles aren't worn and leaky. Check pipe connections and valves to prevent leaks.

Operate sprinklers at recommended pressure. Use application rate, efficiency factor and time of application to figure how much to apply.

Consider trickle systems for orchards, vineyards, etc. Operate at recommended design values and maintain the filter system.

IRRIGATION MANAGEMENT

Measure the amount of water applied to the field. This can indicate when and how much to irrigate.

Consider alternate row irrigation for crops planted in furrows. But remember to alternate the "alternate" row in later irrigations.

Consider shorter runs if you furrow irrigate. Match stream size and velocity to soil intake rate and capacity.

Consider catching and re-using tail water by pumping it back to the head of the system or re-using elsewhere.

Irrigate most crops when soil moisture reaches about 50 percent of capacity.

SPRINKLER SYSTEMS

Range & Pasture Demand Extra Care When Water is Short

Roots transport moisture and nutrients to growing plants. When plants are overgrazed, root growth stops; when root growth stops, leaf growth stops too.

RATHER THAN RISK PERMANENT DAMAGE TO GRAZING RESOURCES:

- Reduce livestock numbers to balance with forage supply

IRRIGATED PASTURE management practices which encourage root and leaf growth are the same practices which allow plants to make the best use of soil moisture. They include:

- Rotation grazing with adequate rest and regrowth periods
- Leaving 4-6 inches of top growth at the end of each grazing period

• Fertilizing properly

- Applying irrigation water in the right amount at the right time

RANGE AND DRY PASTURE forage production depends entirely on natural moisture. Overgrazing during a drought does more damage to perennial plants than during a season of normal moisture. It reduces plant vigor, stops root and leaf growth, reduces ground cover, and invites accelerated erosion. Once erosion begins, it tends to get worse each year, further reducing plant vigor and forage production. This process is difficult to reverse.

RATHER THAN RISK PERMANENT DAMAGE TO GRAZING RESOURCES:

- Check with local SCS and ASCS offices to learn if regular or emergency cost-share programs are available to help with spring development, water harvesting, storage tanks, or other water conservation practices
- Don't overgraze or otherwise disturb streambank vegetation (it will be needed to prevent erosion, reduce sediment, and provide food and cover for wildlife)
- Remember, if a pasture unit must be abused, well established seedings can tolerate overgrazing better than native range.

WILDLIFE will suffer during a drought as much or more than domestic livestock. The wildlife that shares your land is a valuable natural resource. To help wildlife:

- Include additional features at stock water developments which will allow small animals and birds safe access to water (these are usually not expensive and are easily installed)
- Fence ponds and springs and install collector pipes to deliver water to a tank or trough. This will save the water source from damage by livestock trampling, as well as allow access by small animals and birds to lush vegetation that grows close
- Give spring development high priority (even mediocre springs will be helpful)

Crop & Soil Actions to Stretch a Short Water Supply

The threat of water shortage means that many irrigators will have to make some difficult pre-planting decisions.

The acreage you normally plant and the type of crops planted may need to be adjusted. Some crops use more water than others. Some crops need water later in the growing season when water may no longer be available.

Experiments have proven that fertile soils make more efficient use of irrigation water. If you cut back on acreage, make certain you plant your most fertile acres. Concentrate available water on those acres rather than trying to stretch it over the entire farm.

Knowing soil type is important. It is your guide to rate and frequency of irrigation.

Here's a checklist of things to consider during this year's cropping season.

Know precisely how fast your soil can accept water and its total water-holding capacity. This will allow you to decide how much water to apply at a given time.

Know how much water is being delivered to the field. This will give an indication of how long to irrigate.

Determine the need for irrigation by shovel, auger, moisture meter, or the feel method.

WHEN IRRIGATION IS NEEDED, SOIL WILL FEEL AND ACT THIS WAY:

SOIL TEXTURE	A HANDFUL OF SOIL WILL:
Coarse	Tend to stick together slightly, but will not form a ball.
Medium	Be crumbly, but will form a ball.
Fine	Be pliable, and will form a ball.

Decide whether you will have a little water all season, or more in the spring and none later on. Vary crops accordingly. For instance, alfalfa, cool-season grasses, corn, sugar beets and cotton need water all season, but wheat, barley or rye need water early in the season.

All plants have critical water need times. Make sure you can provide your crops with water during their critical growth stages. Here are some examples of critical water need periods:

CROP	CRITICAL WATER NEED
Alfalfa	Just after cutting for hay; at the start of flowering for seed production.
Corn	Early ear formation; from tasseling to silking stage.
Potatoes	Needs high soil moisture levels until potatoes are well-formed.
Small Grains	Boot to heading stage.
Sorghum	From boot to grain formation.
Soybeans	Flowering and fruiting stage.
Sugarbeets	First month after emergence.
Tomatoes	Flowering to fruiting stage.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

STATE

California Cooperative Snow Surveys
California Department of Parks and Recreation
California Department of Water Resources
Colorado River Commission of Nevada
Idaho Cooperative Snow Surveys
Nevada Association of Conservation Districts
Nevada Department of Conservation & Natural Resources
 Division of Water Resources
 Nevada State Forester
 Division of Conservation Districts
Oregon Cooperative Snow Surveys
University of Nevada, Desert Research Institute
Utah Cooperative Snow Surveys

FEDERAL

Bureau of Reclamation
Forest Service
Geological Survey
Soil Conservation Service
U.S. District Court - Federal Water Master
NOAA, National Weather Service

PRIVATE

Nevada Irrigation District
Owyhee Project North Board of Control
Owyhee Project South Board of Control
Pacific Gas and Electric Company
Pershing County Water Conservation District
Sierra Pacific Power Company
Truckee - Carson Irrigation District
Walker River Irrigation District
Washoe County Water Conservancy District

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
1201 TERMINAL WAY, SECOND FLOOR
RENO, NEVADA 89502

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

THIRD CLASS BULK RATE
POSTAGE AND FEES PAID
USDA • SCS
PERMIT NO G-267

THIRD CLASS MAIL

**Nevada
Water Supply Outlook**

and

Federal — State — Private
Cooperative Snow Surveys



SOIL CONSERVATION SERVICE

USDA-NAT'L AGRICULTURAL LIB.
SERIALS CONTROL
ROOM 002

BELTSVILLE, MD 20705